

In the Claims:

Please amend claims 1, 5-7, 9, 23, 26, 30, 37, 40, 44. The rewritten clean version of the pending claims is provided immediately below. Attached at the end of this paper is an Appendix providing an indication of the changes relative to the prior version of the claims, as required by Rule 121.

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1. (Amended) A method of isolating a telephone line, comprising:
- providing modem circuitry;
  - providing system side line isolation circuitry;
  - integrating the modem circuitry and system side line isolation circuitry within a single integrated circuit, the single integrated circuit configured to communicate through an isolation barrier;
  - providing an asynchronous serial port on the single integrated circuit, the asynchronous serial port being configured to communicate with a system-side external circuit; and
  - configuring the single integrated circuit to use the asynchronous serial port to transfer data formatted with a synchronous modem transmission protocol between the single integrated circuit and the system-side external circuit through the asynchronous serial port.
2. The method of claim 1 wherein the synchronous modem transmission protocol is an HDLC protocol.
3. The method of claim 1 wherein the asynchronous serial port is a transmit pin of the single integrated circuit.
4. The method of claim 1 wherein the asynchronous serial port is a receive pin of the single integrated circuit.
5. (Amended) The method of claim 4, further comprising providing a transmit pin of the single integrated circuit, the receive pin and the transmit pins being asynchronous serial pins, the receive pin configured to receive modem information into the single integrated circuit from the external system-side circuit and the transmit pin configured to transmit modem information from the single integrated circuit to the external system-side circuit.

6. (Amended) A method of transferring information between a modem circuit and an external circuit, comprising:

providing data formatted with a synchronous modem transmission protocol to an asynchronous serial pin of a modem circuit; and

using the asynchronous serial pin to transfer the data formatted with the synchronous modem transmission protocol between the modem circuit and an external circuit through the asynchronous serial pin in an asynchronous manner.

7. (Amended) The method of claim 6, wherein the modem circuit integrated with a system side line isolation circuit.

8. The method of claim 7, the system side line isolation circuit being configured to transfer data across an isolation barrier.

9. (Amended) The method of claim 6, wherein the transferring comprises transmitting data from the modem circuitry to the external circuit.

10. The method of claim 9, further comprising the modem circuitry indicating synchronous modem transmission protocol information.

11. The method of claim 10, the synchronous modem transmission protocol information indicating an end of frame event.

12. The method of claim 11, further comprising providing a frame result word at the serial pin.

13. The method of claim 10, the synchronous modem transmission protocol information provided at an output pin separate from the serial pin.

14. The method of claim 13, the synchronous modem transmission protocol information being an end of frame signal.

15. The method of claim 10, the synchronous modem transmission protocol information being provided through the serial pin.

16. The method of claim 15, the synchronous modem transmission protocol information being contained in at least one control bit of a word provided at the serial pin.

17. The method of claim 16, the synchronous modem transmission protocol information indicating an end of frame event.

18. (Amended) The method of claim 6, wherein the transferring comprises transmitting data from the external circuit to the modem circuitry.

19. The method of claim 18, further comprising the modem circuitry indicating synchronous modem transmission protocol information.

20. The method of claim 19, the synchronous modem transmission protocol information provided at an output pin separate from the serial pin.

21. The method of claim 10, the synchronous modem transmission protocol information being a signal indicating that the modem is available to accept additional data.

22. The method of claim 21, the signal being a clear to send signal.

23. (Amended) A method of transferring data between modem circuitry and an external circuit, the method comprising:

providing the modem circuitry within an integrated modem and system side line isolation circuit;  
providing the integrated modem and system side line isolation circuit with an asynchronous serial pin;

providing data formatted with a synchronous modem transmission protocol to the asynchronous serial pin; and

using the asynchronous serial pin to transfer the data formatted with the synchronous modem transmission protocol between the modem circuitry and a system-side external circuit through the asynchronous serial pin.

24. The method of claim 23, the system side line isolation circuit configured to transfer data across an isolation barrier.

25. The method of claim 23, the synchronous modem transmission protocol being a framed HDLC protocol.

26. (Amended) The method of claim 23, further comprising:

providing information on a first control pin separate from the serial pin when the modem is ready to accept additional data from the interface; and  
providing information either on a second control pin separate from the serial pin or on the serial pin indicating when an end of frame has occurred.

27. The method of claim 26, further comprising providing a frame result word at the serial pin.

28. The method of claim 26, the information indicating when an end of frame has occurred being contained in at least one control bit of a word provided at the serial pin.

29. The method of claim 26, the information indicating when an end of frame has occurred being provided on a second control pin separate from the serial pin.

30. (Amended) Circuitry for transferring data formatted with a synchronous modem transmission protocol, comprising:

an integrated modem and line-isolation circuit;  
an asynchronous serial pin, the asynchronous serial pin being an input or output pin of the integrated modem and line-isolation circuit; and  
means to enable use of the asynchronous serial pin to transfer of data formatted with the synchronous modem transmission protocol between the integrated modem and line-isolation circuit and an external circuit through the asynchronous serial pin.

31. The circuitry of claim 30 wherein the means comprises a control pin providing synchronous modem transmission protocol information.

32. The circuitry of claim 31, the synchronous modem transmission protocol information being end of frame information.

33. The circuitry of claim 31, the synchronous modem transmission protocol information being clear to send information.

34. The circuitry of claim 30 wherein the means comprises providing synchronous modem transmission protocol information at least one bit of words transferred through the asynchronous serial pin.

35. The circuitry of claim 34, the synchronous modem transmission protocol information being end of frame information.

36. The circuitry of claim 30, the synchronous modem transmission protocol being an HDLC framing protocol.

37. (Amended) An integrated line isolation circuit, comprising:

modem circuitry and system side line isolation circuitry integrated within the line isolation circuit; and

an asynchronous serial interface pin coupled to the modem circuitry and the system side line isolation circuitry, the integrated line isolation circuit configured to use the asynchronous serial interface pin to transfer data formatted with a synchronous modem transmission protocol between the line isolation circuit and a system-side external circuit through the asynchronous serial interface pin.

38. The circuit of claim 37, the line isolation circuit configured to transfer data across an isolation barrier.

39. The circuit of claim 37, the synchronous modem transmission protocol being a framed HDLC protocol.

40. (Amended) The circuit of claim 37, further comprising:

a first control pin separate from the serial pin, information presented on the first control pin indicating when the modem is ready to accept additional data from the interface; and wherein information indicating when an end of frame has occurred is either indicated at a second control pin separate from the serial pin or indicated within information presented on the serial pin.